

Amendments to the Claims:

This listing of the claims will replace ~~all~~ prior versions, and listings, of claims in the application:

Listing of the Claims:

1. (currently amended) Computer interface system for providing a haptic virtual environment for use in surgical training and/or surgery simulation comprising:

B³ (a) means for providing a cursor with attributes of movement within multiple layers of a graphic display ~~for linkage with~~ to create or modify one or more virtual objects;

(b) means for generating the a haptic representation of said one or more virtual objects directly from the a graphical representation of said one or more virtual the objects, wherein said one or more virtual objects comprise a plurality of layers that are represented by a three-dimensional poly-mesh form ~~for linkage with the cursor;~~

(c) means for creating, modifying, and saving haptic properties of said one or more virtual objects ~~materials for creating a heuristic database to be used in the modeling of haptic virtual environments~~ and creating or modifying such a heuristic database; and

(d) means for selecting all or a portion or portions of said haptic properties from ~~utilizing the material~~ said heuristic database for the modeling of haptic virtual environments,

the system as a whole being constructed and managed ~~do~~ that a user can create said haptic virtual environment without generating computer code.

2. (currently amended) The system of claim 1, wherein said ~~data-base~~ heuristic database comprises one or more properties of static friction, dynamic friction, stiffness, and damping components.

3. (new) A method of developing and utilizing complex and precise haptic virtual objects for use in surgical training comprising the steps of:

creating a cursor with attributes of movement within multiple layers of a graphic display to create or modify one or more virtual objects;

selecting a virtual object with said cursor;

modifying said virtual object to create a volumetric three-dimensional poly-mesh form that includes a plurality of layers, wherein a computing system converts said virtual object into said poly-mesh form without a user performing any software coding;

modifying a surface stiffness of one or more layers of said poly-mesh form; and

modifying a static and dynamic friction of one or more layers of said poly-mesh form.

4. (new) The method of claim 3, further including the step of touching said virtual object via a haptic device to produce a feeling substantially identical to touching a corresponding tangible object.

5. (new) The method of claim 3, as implemented such that a plurality of properties of said virtual object can be easily modified in order to closely represent human tissue properties.
